

Study shows improved survival among premature babies, risk of developmental delay remains high

August 16 2017

Survival of preterm babies has increased worldwide. Recent studies have focused on outcomes of extremely preterm children (born at 22-26 weeks' gestation), but outcomes of children born very and moderately preterm (between 27 and 34 weeks' gestation) have rarely been reported.

It is therefore a challenge for doctors to identify children most at risk of later developmental delay.

So a team of researchers, who are based at INSERM, the French National Institute of Health and Medical Research compared rates of survival - and survival without neuromotor and sensory disabilities such as [cerebral palsy](#), blindness and deafness - in children born alive at 22-26, 27-31, and 32-34 weeks' gestation in 1997 and 2011.

Using data from the EPIPAGE study - designed to investigate outcomes of preterm children over the past 15 years - they identified 5,567 infants born at 22 to 34 weeks' gestation in 2011 in France. The Ages and Stages Questionnaire (ASQ) was used to assess developmental delay.

Rates of survival without severe or moderate neuromotor and sensory disabilities at 2 years of age were 48.5% for children born at 22-26 weeks' gestation, 90% at 27-31 weeks' gestation, and 97.5% at 32-34 weeks' gestation. Only one child born at 22-23 weeks' gestation survived.

After taking account of changes in the baseline characteristics of infants over time, rates of survival and survival without severe or moderate neuromotor and sensory disabilities at 2 years of age increased between 1997 and 2011 for children born at 22-31 weeks' gestation, but no change was found for children born at 24 weeks' gestation or earlier.

Rates of cerebral palsy decreased by 3.3% between the two time periods, which was statistically significant, at both 24-31 and 32-34 weeks' gestation.

After excluding children with cerebral palsy, blindness, deafness, or severe congenital brain malformations, 50%, 41%, and 36% of children born at 24-26, 27-31, and 32-34 weeks' gestation, respectively, had ASQ scores below threshold and were considered at risk of developmental delay. Delays in language development as well as poorer social-emotional competence most frequently scored below threshold.

The authors point out that this is an observational study, so no firm conclusions can be drawn about cause and effect, and they outline some limitations which could have introduced bias.

Nevertheless, they say, despite improvements in neuromotor and sensory outcomes, a high number of children born before 34 weeks are at risk of [developmental delay](#).

And they suggest that using parental questionnaires as a first step approach to assess development "may allow clinical resources to be focussed on those most likely to benefit."

More information: *BMJ* (2017).
www.bmj.com/content/358/bmj.j3448

Provided by British Medical Journal

Citation: Study shows improved survival among premature babies, risk of developmental delay remains high (2017, August 16) retrieved 10 July 2023 from <https://medicalxpress.com/news/2017-08-survival-premature-babies-developmental-high.html>

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